REMARKS

The Office Action dated November 18, 2005, has been received and carefully reviewed. The following remarks form a full and complete response thereto. Claims 1-14 are pending in this application and are submitted for reconsideration.

Claims 1-8, 10-12 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable by being alleged obvious over U.S. Patent No. 5,876,765 ("Hinterlechner") in view of U.S. Patent No. 5,282,733 ("Noritake"). Claims 9 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable by being alleged obvious over Hinterlechner in view of Noritake, in further view of U.S. Patent No. 6,537,053 ("Watkins").

The Applicant traverses the rejections and submits that claims 1-14 recite subject matter not disclosed or suggested by the combination of cited prior art.

Claim 1, upon which claims 2-14 depend, defines a standardized modular system for moulds of injection moulding machine. The system includes an injection assembly, an ejection assembly, a mould, mould inserts, and first and second adapter means. The injection assembly is provided with a plurality of injectors for injection of plastic material into the mould. The ejection assembly is provided with a plurality of ejectors for ejection of the moulded item from the mould. The mould includes a fixed mould half associated with the injection assembly, and a movable mould half associated with the ejection assembly and movable from a mould closed position wherein the plastic material is injected into the mould to a mould open position wherein the item formed by the mould is ejected. Female mould inserts and male mould inserts are removably mounted in special seats formed respectively in a female mould plate of the fixed mould half and in a male mould plate of the movable mould half so as to be modularly composable and decomposable, according to the item to be moulded. The first adapter means is disposed, interchangeably, between the injection assembly and the fixed mould half so as to allow the arrangement of the injectors of the injection assembly to be varied. The second adapter means is disposed, interchangeably, between the ejection assembly and the movable mould half so as to allow the arrangement of the ejectors of the ejector assembly to be varied.

Hinterlechner discloses a first half-mould assembly in its Fig. 1 and a second half-mould assembly in its Fig. 2. The first half-mould assembly includes a stationary plate (1), a temperature adjusting plate (2), a mold carrier plate (3) and a mounting plate (4). The mounting plate (4) provides two seats wherein two inserts (cavity bars 5, 6) are detachably mounted. The inserts (5, 6) are provided with respective cavities (5A, 6A).

The second half-mould assembly of Hinterlechner includes a stationary plate (21), a temperature adjusting plate (22), a mold carrier block (23) and a mounting plate (24). The mounting plate (24) provides three seats wherein two inserts (cavity bars 25, 26) and a distributor (runner block 27) are mounted. The inserts (25, 26) are provided with respective cavities (25A, 26A).

The mould is closed (the two half-mould assemblies are abutted one against the other), when the cavities (5A, 5B) of the first assembly match with the cavities (25A, 25B) of the second assembly.

In Hinterlechner, only one injector (8) is mounted in the stationary plate (1) of the first half-mould assembly. The head (12) of the injector injects the plastic material into a channel (13) of the mounting plate (4) communicating with the distributor (27) which distributes of the plastic material into the insert cavities. Four ejectors (41) (two for each insert) act into the cavities (25A, 26A) of the inserts of the second assembly, for ejecting the moulded items.

The Applicant submits that Hinterlechner merely discloses all the common features of any mould assembly along with the possibility of changing the inserts (5, 6) of the first half-mould assembly. However, Hinterlechner differs from the presently claimed invention because in Hinterlechner, the position of injector (8) cannot be adjusted and the injector (8) cannot be replaced with a different injector, otherwise the mounting plate (4) has to be replaced. This is prevented by the injector head (12) matching with the seat (13) of the mounting plate (4). Further, Hinterlechner includes only one injector which is not in direct communication with the inserts (5, 6), and there is no need to adjust the injector position.

Further, Hinterlechner does not disclose that the inserts (25, 26) of the second assembly are detachably mounted, as required by claim 1 of the present invention. The Applicant submits that replacement of the inserts (25, 26) of the second assembly is very difficult, because it is strongly limited by the presence of the ejectors (41). In fact the position of the ejectors (41) cannot be adjusted, because the mold carrier block (23) should be replaced. As a result the whole second half-mould assembly has to be replaced.

Noritake fails to make up for the above-described deficiencies of Hinterlechner. For example, Noritake discloses only one injection nozzle (not shown) (column 2, lines

40-46) which engages with the nozzle bushing (2). The plastic material from the spruce (2a) of the nozzle bushing (2) is delivered to a runner plate (6) which distributes the material to runners (8a, 8g) of the first sub-mold (8). The runners (8g) end with a gate (8c) which communicates with the cavity (17a) of the second sub-mold (17). Therefore gate (8c) is not an injection nozzle, but it is an aperture of a channel (8g) provided into the first sub-mold (8). It is evident that the runners (8g) and their gates (8c) cannot be displaced and replaced because the whole sub-mold (8) would be replaced.

Noritake's moulding machine is well known in the art. It provides only one injection nozzle and a plurality of distribution channels shaped as a "spider" which distributes the plastic material into the cavities of the mold. The Applicant submits that this type of machine causes many drawbacks relating to the quality of the printed item. The plastic material solidifies into the distribution channels. As a result part of solidified material is injected into the mold cavities. Therefore, the printed item has some aesthetic imperfections.

Thus, the combination of Hinterlechner and Noritake fails to disclose each and every element of claim 1, upon which claims 2-14 depend. Watkins fails to disclose any injection assembly whatsoever. See, e.g., col. 14, 62-66 of Watkins. Thus, the combination of cited prior art fails to disclose or suggest each and every element of claim 1, upon which claims 2-14 depend. Accordingly, the Applicant requests that the rejections be withdrawn and that claims 1-14 be allowed.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event that this paper is not timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account No. 02-2135.

Respectfully submitted,

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Date

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